PROSTATE CANCER DEATHS, 1982–96

INTRODUCTION

Prostate cancer (ICD-9 code 185) is the malignant enlargement of the prostate gland and is responsible for over 13% of all deaths from cancer in males. For over two decades, prostate cancer has ranked as the second leading cause of cancer deaths in males, after lung cancer which accounts for about a quarter of all male cancer deaths. Although the aetiology of prostate cancer is not yet fully understood, some life style, environmental and familial or genetic factors have been found to be associated with the disease (footnote 1). Life style factors related to the disease include high fat diet, obesity and lack of physical activity. It has been suggested that contamination of the environment may also be an important factor (footnote 2).

TRENDS IN DEATHS

From 1982 to 1996, deaths per year ascribed to prostate cancer have nearly doubled, rising from 1,356 in 1982 to 2,660 in 1996 (table 9.11). The corresponding death rate has risen from 17.9 deaths to 29.2 deaths per 100,000 of the male population during the same period, an increase of 63%. The age-standardised death rate for prostate cancer, however, increased by 19%, rising from 21.7 deaths per 100,000 of the male population in 1982 to 25.8 in 1996. This suggests that a 44 percentage point rise in the death rate during the period was due to the ageing of the male population. Since 1993, the standardised death rate from prostate cancer has declined slowly.

INTERNATIONAL COMPARISON

The 1994 Australian age-standardised death rate from prostate cancer (27.1 deaths per 100,000 males) was noticeably lower than comparable rates reported among the countries selected for comparison. It should be noted that the years used for comparison vary between 1992 and 1994 for different countries. Since annual death rates have fluctuated in most countries, the relative ranking of any country referred to in the analysis can vary according to the year selected for comparison. These rates were computed using the latest information available from the WHO (footnote 3). International comparisons of prostate cancer death rates can also be affected by variations in diagnosis and reporting practices between countries. Nevertheless, the standardised death rates for the countries selected for comparison still provide some indication of the relative ranking and show mainly the influence of genetic and environmental factors.

9.11 PROSTATE CANCER DEATHS, Number and Rates			
Year	Number of deaths	Crude death rate	Standardised death rate(a)
1982	1,356	17.9	21.7
1983	1,394	18.1	21.7
1984	1,403	18.0	20.9
1985	1,588	20.1	22.9

1986	1,642	20.5	22.6
1987	1,744	21.5	23.2
1988	1,884	22.8	24.2
1989	2,014	24.0	25.0
1990	2,091	24.6	25.2
1991	2,115	24.5	24.5
1992	2,370	27.2	26.5
1993	2,543	28.9	27.5
1994	2,590	29.2	27.1
1995	2,575	28.6	26.0
1996	2,660	29.2	25.8

(a) Standardised rate per 100,000 males. The 1991 total Australian male population was used as the standard.

Source: ABS, published and unpublished causes of death data 1982–1996.

There is a wide variation in the standardised death rates from prostate cancer across the countries, ranging from 2.0 per 100,000 men in the Republic of Korea to 35.1 in Norway (table 9.12). The standardised death rates from prostate cancer recorded for Norway, Switzerland and New Zealand were substantially higher than the Australian rate for 1994. The Netherlands recorded a death rate similar to that in Australia. However, in 1994 Australia had a standardised death rate for prostate cancer much higher than in countries such as the United Kingdom, the USA and Canada.

AGE-SPECIFIC DEATH RATES

As prostate cancer is a disease associated with ageing, the number of deaths reported for men under the age of 45 years was extremely small, totalling only 7 deaths over the 15-year period. Therefore, further analysis has been restricted to men 45 years and over, the group most exposed to the risk of prostate cancer death. The number of deaths and age-standardised death rates have been averaged over three-yearly intervals in table 9.13, to minimise the effects of random fluctuations.

There is a substantial time lag between the onset of the disease and its progression to a tumour which generally emerges at old age; as a result the age-specific death rates from prostate cancer rise with advancing age. The age-specific death rate from prostate cancer rises rapidly from 45–49 to 65–69 and then increases more slowly. This may imply the likelihood of men of older ages dying from causes other than prostate cancer as the death at old age is normally accompanied by a number of coexisting conditions rather than a single morbid condition.

The age-specific death rates from prostate cancer rose for most age groups during the reference period. The rate of increase, however, varied between age groups and time periods. While the age-specific death rates have fluctuated over the 15–year period, they were substantially higher at the end of the period (1994–96) than the beginning (1982–84). These increases were particularly rapid among men over the age of 60 years, ranging from 17.2% for the age group 75–79 years to 39.5% in the group 85 years and over.

9.12 AGE STANDARDISED DEATH RATE(a) FROM PROSTATIC CANCER IN SELECTED COUNTRIES		
Country	Year	Standardised death rate(a)
Norway	1993	35.1
Switzerland	1994	33.8

New Zealand	1994	29.6
Netherlands	1994	27.9
Australia	**1994**	**27.1**
United Kingdom	1994	24.9
United States	1992	24.8
Canada	1993	23.9
Japan	1994	6.3
Hong Kong	1993	4.8
Republic of Korea	1994	2.0

(a) Standardised death rate per 100,000 males. The 1991 total Australian male population was used as the standard for all countries in the comparison.

Source: 1995 World Health Statistics Annual, WHO, Geneva.

9.13 PROSTATE CANCER DEATHS, By Age

	Three year average death rate per 100,000 males aged 45 years and over					
Age group	1982–84	1985–87	1988–90	1991–93	1994–96	1996
45-49	0.8	0.8	0.9	1.1	1.3	1.5
50-54	3.1	3.1	3.3	3.7	3.6	3.5
55-59	11.2	10.9	12.5	14.8	12.3	13.3
60-64	29.8	32.4	35.8	34.9	37.3	32.8
65–69	68.2	75.5	79.4	90.5	82.9	83.6
70–74	144.0	147.9	170.7	176.1	176.1	169.1
75–79	276.0	296.4	321.1	320.0	323.4	318.5
80–84	462.7	486.2	515.9	550.5	547.9	531.0
85 and over	674.1	751.7	793.8	882.0	940.6	955.3

Source: Causes of Death, Australia, 1995 (3303.0); ABS, unpublished causes of death data, 1996.

FOOTNOTES

1 Australian Health Technology Advisory Committee (1989) OF THE nhmrc, "Prostate cancer screening", Commonwealth Department of Health and family Services, AGPS, Canberra. back
2 Key, T. (1995) "Risk factors for prostate cancer", Cancer Survey, vol. 23: 63-77.back
3 World Health Organization, "1995 World Health Statistics Annual", WHO, Geneva.back

This page last updated 18 June 2009